

**SIGNIFICANT PERMIT REVISION NO. 43398
TO PERMIT NO. 1000046
(AS REVISED BY SIGNIFICANT REVISION NO. 29622)
PHELPS DODGE MIAMI, INC.**

SIGNIFICANT PERMIT REVISION DESCRIPTION

This Significant Permit Revision to Operating Permit No.1000046 (as revised by Significant Permit Revision No. 29622) authorizes the Phelps Dodge Miami Smelter to install a coal injection system for pulverizing coal and injecting pulverized coal into the Isa vessel. In the coal injection system, coal is crushed in an impact mill, and air swept by hot air heated by a natural gas heater to the cyclone separator. Crushed coal from the cyclone goes to a vibrating screen. Oversized material is sent back to crusher. Fine crushed coal is sent to the Isa vessel via the buffer hopper and Roto Feed injection system. The facility has voluntarily proposed to install a dust collector (pulse jet baghouse or cartridge filter) on the coal injection system to control particulate matter emissions.

The increase in emissions from the coal injection system is as follows:

Pollutant	Increase in emissions
	Tons per year
CO	0.72
NO _x	0.86
SO ₂	0.01
PM ₁₀	0.64
VOC	0.05

This significant revision will result in the following changes to the Permit No. 29622:

ATTACHMENT "B"

The following Section is included in the requirements set forth in Attachment "B" of Operating Permit No.1000046 (as revised by Significant Permit Revision No. 29622):

XXI. Coal Injection System

A. Pulverizer

Particulate Matter and Opacity

1. Emission Limitations/Standards

- a. The Permittee shall not cause, allow or permit the discharge of particulate matter into the atmosphere in any one-hour from the coal injection system in total quantities in excess of the amounts calculated by the following equation:

$$E = 4.10P^{0.67}$$

where:

E = the maximum allowable particulate emissions rate in pounds-mass per hour.

P = the process weight rate in tons-mass per hour.

[A.A.C. R18-2-716.B.1]

- b. For purposes of this Section, the total process weight from all similar units employing a similar type process shall be used in determining the maximum allowable emissions of particulate matter. [A.A.C. R18-2-716.D]
- c. The opacity of any plume or effluent from any process source subject to the provisions of this Section shall not be greater than 20%.
[A.A.C. R18-2-702.B]
- d. If the presence of uncombined water is the only reason for an exceedance of the visible emissions requirements in XXI.A.1.c above, the exceedance shall not constitute a violation of the applicable opacity limit.
[A.A.C. R18-2-702.C]
- e. Fugitive emissions from the coal injection system shall be controlled in accordance with Section XIV of Attachment B. [A.A.C. R18-2-716.E]

2. Air Pollution Control Requirements

When the coal injection system is in operation, the Permittee shall install, operate and maintain the dust collector (pulse jet baghouse or cartridge filter) associated with the coal injection system, in a manner consistent with good air pollution control practice for minimizing particulate matter emissions.

[A.A.C. R18-2-306.01.A and -331.A.3.d and e]

[Material Permit Conditions are indicated by underline and italics]

3. Monitoring, Record keeping and Reporting Requirements

- a. A certified EPA Reference Method 9 observer shall conduct a bi-weekly (once in two weeks) survey of visible emissions emanating from the coal injection system. If the opacity of the emissions observed appears to exceed the standard, the observer shall conduct a certified EPA Reference Method 9 observation. The Permittee shall keep records of the initial survey and any EPA Reference Method 9 observations performed. These records shall include the emission point observed, location of observer, name of observer, date and time of observation, and the results of the observation. If the observation results in an exceedance of the opacity limit contained in Condition. XXI.A.1.c above, the Permittee shall take corrective action and log all such actions. Such exceedance shall be reported as excess emissions in accordance with Condition XI.A.1 of Attachment "A".
[A.A.C. R18-2-306.A.3.c]
- b. The Permittee shall maintain logs of all maintenance activities performed on the dust collector (pulse jet baghouse or cartridge filter). These logs shall be maintained on-site and shall be readily available to ADEQ representatives upon request.
[A.A.C. R18-2-306.A.3.c]

4. Permit Shield

Compliance with the conditions of this Part shall be deemed compliance with the A.A.C. R18-2-702.B, A.A.C. R18-2-702.C, A.A.C. R18-2-716.B.1, A.A.C. R18-2-716.D and A.A.C. R18-2-716.E.
[A.A.C. R18-2-325]

B. Air Heater

1. Applicability

This part is applicable to the air heater in the coal pulverizer system.

2. Fuel Limitations

The Permittee shall only fire natural gas fuel in the air heater. [A.A.C. R18-2-306.A.2]

3. Particulate Matter and Opacity

a. Emissions Limitations and Standards

- i. The Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any fuel-burning operation into the atmosphere in excess of the amounts calculated by the following equation:

$$E = 1.02 Q^{0.769}$$

Where

E = the maximum allowable particulate emission rate in pounds-mass per hour

Q = the heat input in million Btu per hour
[A.A.C. R18-2-724.C.1]

- ii. The Permittee shall not cause, allow or permit the opacity of any plume or effluent from any boiler to exceed 15%.
[A.A.C. R18-2-724.J]

2. Monitoring, Recordkeeping, and Reporting

- a. The Permittee shall keep records of fuel supplier certifications to demonstrate compliance with the PM limit specified above. The certification shall contain information regarding the name of fuel supplier and lower heating value of the fuel. These records shall be made available to ADEQ upon request. [A.A.C. R18-2-306.A.3.c]
- b. The Permittee shall report all 6-minute periods during which the visible emissions exceed 15 percent opacity, as required under Section XII of Attachment "A". [A.A.C. R18-2-724.J]

3. Permit Shield

Compliance with this Part shall be deemed compliance with A.A.C R18-2-724.C.1, and A.A.C R18-2-724.J. [A.A.C. R18-2-325]

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ATTACHMENT "G"

The following equipment are included in the equipment list in the Attachment "G" of Operating Permit No. 1000046 (as revised by Significant Permit Revision No. 29622):

NAME	CAPACITY	MAKE	MODEL	SERIAL NUMBER	DATE OF MANUFACTURE	EQUIPMENT NUMBER
Air-Swept Impact Dryer Mill	5 tons/hour	TBD	TBD	TBD	TBD	TBD
Spinner Separator/ Classifier		TBD	TBD	TBD	TBD	TBD
Bearing Lube System		TBD	TBD	TBD	TBD	TBD
Cyclone Separator		TBD	TBD	TBD	TBD	TBD
Screening Device		TBD	TBD	TBD	TBD	TBD
Pulse Jet Baghouse		TBD	TBD	TBD	TBD	TBD
Rotofeed Injection System		TBD	TBD	TBD	TBD	TBD
Air heater	2 MMBtu/hr	TBD	TBD	TBD	TBD	TBD
Main Fan		TBD	TBD	TBD	TBD	TBD
Discharge Fan		TBD	TBD	TBD	TBD	TBD
Screw Conveyor		TBD	TBD	TBD	TBD	TBD
Sizing Screen		TBD	TBD	TBD	TBD	TBD